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Parotid Mass as First Symptom of a Malignant Lymphoma

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Background and Objectives: Primary malignant lymphoma in the parotid gland is rare and seldom described in the literature. We studied the medical history and outcome of seven patients with a primary malignant parotid lymphoma. We looked for prognostic variables and for different behavior of these lymphomas in comparison to lymphomas in the usual sites.

Methods: Between 1985 and 1995, we conducted a retrospective study of the medical histories of malignant parotid tumors operated at our hospital. There were 18 malignancies, of which 7 were primary malignant lymphomas. We classified them according to Rosenberg et al. [Blood 1994;84: 1359–1392]. Outcome and survival time were compared with malignant lymphomas in usual sites. Further we looked for possible prognostic factors.

Results: We found an unusually high percentage of primary malignant lymphomas in the parotid gland in our series: 38% of all malignancies. Histological workup showed one Hodgkin lymphoma, two marginal zone B-cell non-Hodgkin lymphomas, two lymphoplasmocytoid non-Hodgkin lymphomas, and two follicular non-Hodgkin lymphomas. The clinical course of these lymphomas is comparable to that in lymphomas in the usual sites.

Conclusions: Primary malignant lymphomas in the parotid gland have no different behavior compared to lymphomas in usual sites. There are no prognostic variables that distinguish a malignant lymphoma in the parotid gland. The only difference is a rather difficult operation to obtain a histologic specimen. *J. Surg. Oncol. 1998;67:25–27.*

KEY WORDS: salivary gland tumor; Hodgkin; non-Hodgkin; prognostic variables; treatment

INTRODUCTION

In the literature, primary malignant parotid lymphomas have been rarely described. They form 0.2–0.8% of malignant tumors in the parotid gland [1]. The incidence in The Netherlands is 0.7% for salivary gland malignancies, 2.5% for Hodgkin lymphoma, and 12.5% for non-Hodgkin lymphoma [2].

During the period 1985–1995, we found 18 malignant parotid tumors of which seven were primary malignant lymphomas (38%). We studied these seven lymphomas retrospectively. The aim of the study was to look for prognostic variables and the results of treatment, with special interest in a possible different behavior of the disease in the parotid gland in comparison with alternative locations.

MATERIALS AND METHODS

We examined the medical histories of 92 patients with a parotid mass treated at our hospital during 1985–1995. We found 7 primary malignant lymphomas in 18 malignant tumors (38%). There were 4 women and 3 men, with a mean age of 70 years. All patients presented with a

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TABLE I. Age, Sex, Results of Fine-Needle Aspiration Biopsy, and Type of Surgery in Seven Patients With a Primary Malignant Lymphoma Located in the Parotid Gland*

Patient no.	Sex	Age (yr)	Fine-needle aspiration	Surgical approach
1	M	53	Lymphoid elements	Excision
2	M	51	Lymphoma	Superficial parotidectomy
3	F	54	Reactive lymph node	Superficial parotidectomy
4	F	80	—	Superficial parotidectomy
5	M	92	Large lymphoid cells	Exploration incision and debulking
6	F	83	—	Superficial parotidectomy
7	F	76	Too low number of cells	Superficial parotidectomy

*F, female; M, male.

TABLE II. Histology After Biopsy, Malignancy Grading, and Classification (According to Rosenberg et al. [4]) of the Parotid Malignant Lymphomas*

Patient no.	Histology after biopsy	Malignancy grading	Rosenberg classification
1	Hodgkin lymphocyte rich	—	Lymphocyte-rich Hodgkin lymphoma
2	Non-Hodgkin MALT	—	Marginal zone B-cell lymphoma n-H
3	Non-Hodgkin MALT, cc	Low	Marginal zone B-cell lymphoma n-H
4	Immunocytoma	Low	Lymphoplasmocytoid lymphoma n-H
5	Immunoblastoma	High	Lymphoplasmocytoid lymphoma n-H
6	Non-Hodgkin diffuse small cellular, cc	Low	Follicular lymphoma n-H
7	Non-Hodgkin follicular cc, cb	Low	Follicular lymphoma n-H

*cc, centrocytic; cb, centroblastic; n-H, non-Hodgkin.

parotid mass. Two were independent of the underlying tissue, and five were attached to it. Five patients had a preauricular mass, and two had a mass below the jaw angle. Mean time of swelling preoperatively was 5.3 months. The lesions had a mean diameter of 3.1 cm. No preoperative lesion of the facialis nerve was noted. There were two cases of minor lymph node swelling in the neck. For diagnostic purposes, five fine-needle aspiration biopsies were performed (Table I). Surgery was performed in all cases.

TREATMENT AND RESULTS

A superficial or lateral parotidectomy was performed five times, one tumor was locally excised, and explorative incision with debulking of the tumor was performed in one patient (Table I). In one patient, there was a temporary drop-out of function of the facial nerve, with full return of function after 1 year.

The histologic findings are presented in Table II. Table III shows the stages of disease, together with the chemo- and radiotherapy performed. There were three recurrences in other sites; there was no local recurrence. The mean disease-free interval was 6.8 years (3–11 years). The actual survival times are shown in Table IV.

Six patients are still alive (85% overall survival) after a mean follow-up of 66 months. One of these patients was lost to follow-up, due to second opinion. One patient died to another cause.

TABLE III. Staging of, and Chemotherapy, and Radiotherapy for, the Malignant Lymphomas and Site of Recurrences as Well as Time to Recurrence After Surgery

Patient no.	Stage	Chemotherapy	Radio-therapy	Recurrence
1	IIa	—	40 Gy	—
2	IIa	—	—	—
3	IIIc	Leukeran	40 Gy	Retromediastinum after 23 mo
4	Ie	—	—	—
5	IV	Oncovin, prednisone	—	—
6	IVe	—	—	Parotid contralateral after 45 mo
7	I, IV, IIIa	Cyclofosfamide, oncovin, prednisone	—	Right groin after 96 mo; left breast after 131 mo

TABLE IV. Survival Time

Patient no.	Survival (mo)
1	60
2	lost to follow-up
3	48
4	96
5	4
6	120
7	132

DISCUSSION

In our series of seven primary malignant lymphomas located in the parotid gland there were two patients with a follicular lymphoma, in an advanced stage. The disease in both patients showed an indolent course. Both patients are alive after aggressive chemotherapy or operation, or both.

Another two patients had marginal zone B-cell lymphomas of the extranodal type. The medical history of

one of these patients mentions hepatitis. The other patient developed a recurrence in the retromediastinum. Both patients had radiotherapy and are free of disease. This coincides with what is generally known about the course of this type of lymphoma [4,8,11].

Further, we found one patient with an immunocytoma. This patient is in remission after treatment without any recurrence of disease until now. The lymphoma was classified as low malignant. The course was indolent, and a monoclonal B-cell population was found. So there was no incongruence with the normal course of these lymphomas. Only the location is rare. The sixth patient, with a immunoblastoma, showed a fast-growing mass with a diameter of 6 cm within 2 months, with invasion of the skin.

In the literature, a similar aggressive growth, in highly malignant immunoblastomas, is recorded [4]. The patient died 4 months after operation from intercurrent cause. The last patient suffered lymphocytic predominant Hodgkin lymphoma. The primary tumor, although in a rare site, was, like lymphomas in general, cured by radiotherapy.

In this series there was an unusually high percentage of primary parotid lymphomas, this in contrast to others (0.2–0.8%) [1]. For these patients, surgery is an important diagnostic tool, also because the accuracy of fine-needle aspiration biopsy is low [3,4]. Other diagnostic procedures, such as computed tomography (CT), ultrasound, or sialography do not add much extra information at the onset of the parotid swelling.

CONCLUSION

An unusually high percentage of primary lymphomas in the parotid gland (38%) was found in our series. Concerning the clinical course, we can conclude that there are no significant differences from lymphomas in more usual sites. Therapy with initial operation and, afterward adequate histologic workup, combined with staging, with or without supplementary radio- and or chemotherapy, was successful. An overall survival of 85% was regarded as fair. The only difference between location of a malignant lymphoma in the parotid gland and elsewhere is a rather complicated operation to obtain tissue for histologic examination. No local recurrence of disease was seen. New prognostic variables could not be determined.

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